

## Tool: Height/Weight Tracking

### Body Mass Index (BMI) Percentile

In 2000, the Centers for Disease Control established age- and gender-specific growth curves for children, based on data from the 1970s (prior to the start of the increasing prevalence of obesity). That data established a normal distribution curve to which we compare children today. According to that distribution, the following definitions of children's weight status were established:

- Healthy weight                      BMI <85<sup>th</sup> percentile
- Overweight                            BMI ≥85<sup>th</sup> percentile and <95<sup>th</sup> percentile
- Obese                                    BMI ≥95<sup>th</sup> percentile

Because children grow at different rates, we chart children's BMI values against the CDC growth curves and rank them according to "percentile" (according to the set normal distribution curve from earlier data). As the prevalence of obesity has grown in recent decades, the distribution curve of a given US population today no longer coincides with the established distribution curve. Currently, 15% of 6 to 11 year olds in the USA are now overweight or and 18% are obese (versus 10% and 5%, respectively, of children from the 1970s that established the distribution curve).

More information about children's BMI can be found at

[http://www.cdc.gov/healthyweight/assessing/bmi/childrens\\_bmi/about\\_childrens\\_bmi.html](http://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/about_childrens_bmi.html)

BMI percentile should be calculated for children specifically for their sex and exact age on the measurement date. An easy way to do this is to use the BMI percentile calculator available from the CDC at: <http://apps.nccd.cdc.gov/dnpabmi/>. Although this is easy, it does require individual calculation (one student at a time) and, at a large school, this would be time consuming. For a large group of students, if you have access to SAS (Statistical Analysis Software, Cary, NC), there are programs available and instructions from the CDC at this web site:

<http://www.cdc.gov/nccdphp/dnpao/growthcharts/resources/sas.htm>

If collected, this information may be used to compare to national childhood healthy weight, overweight, and obesity prevalence rates. It can also be used to monitor long-term effectiveness of the collective group of health-promoting initiatives in your school and community. Good practices for measuring heights and weights are described in the Wisconsin Department of Health Services publication, *To Weigh and Measure*, available online at

<http://www.dhs.wisconsin.gov/publications/P4/p40152.pdf>.

A script has been used to describe this process and its purpose in previous evaluations:

"Today, [*name the person – school nurse? PE teacher? other?*] is going to measure how tall you are and how much you weigh. We want to see how the students at [*this school*] compare to students in other Wisconsin schools. We want to learn whether students in schools that participate in farm to school programs are healthier than students in schools that do not participate in farm to school."

*If there are questions about whether we'll know who they are:*

"We will not put your name with your height and weight, only your evaluation ID number. Lots of students all around Wisconsin are being measured at their schools."